UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/485,246	05/31/2012	Muthian George	83012742	9107

56436 7590 11/28/2016

Hewlett Packard Enterprise
3404 E. Harmony Road
Mail Stop 79
Fort Collins, CO 80528

EXAMINER
TRAN, LOC

ART UNIT	PAPER NUMBER
2155	

NOTIFICATION DATE	DELIVERY MODE
11/28/2016	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

hpe.ip.mail@hpe.com
mkraft@hpe.com
chris.mania@hpe.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MUTHIAN GEORGE and SONG WANG

Appeal 2016-000814
Application 13/485,246
Technology Center 2100

Before BRUCE R. WINSOR, DANIEL N. FISHMAN, and AARON W. MOORE, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants[1] appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–20, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

THE INVENTION

The application is directed to "[d]ata loading with user defined functions." (Abstract.) Claim 1, reproduced below with a disputed limitation in italics, is exemplary:

1. A system for data loading comprising:

at least one hardware processor;

a structured query language (SQL) compiler executed by the at least one hardware processor to:

identify a call to a table valued user defined function within a SQL statement that includes an insert statement, wherein the table valued user defined function is to retrieve data directly from an external data source,

identify metadata associated with the table valued user defined function,

validate and resolve a subclass type of the table valued user defined function based on the metadata and the insert statement, wherein the subclass type is one of a plurality of subclass types defined for the table valued user defined function, and

generate a data loading plan to retrieve and load the data from the external data source into a table of a loading database

---

[1] Appellants identify Hewlett-Packard Development Company, LP as the real party in interest. (*See* App. Br. 1.)

based on the subclass type of the table valued user defined function; and

a data loading engine in the loading database to execute the data loading plan generated by the SQL compiler, the data loading plan including the table valued user defined function to retrieve data from the external data source, and load the retrieved data into the table of the loading database in accordance with the data loading plan.

THE REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Navas et al.	US 2005/0228794 A1	Oct. 13, 2005
Friedman et al.	US 2010/0241646 A1	Sept. 23, 2010
de Castro Alves et al.	US 2011/0161352 A1	June 30, 2011
de Castro Alves et al.	US 2011/0161356 A1	June 30, 2011

Qiming Chen et al., *Efficiently Support MapReduce-like Computation Models Inside Parallel DBMS*, IDEAS '09, pp. 43–53 (ACM 2009) ("Chen IDEAS")

Qiming Chen and Meichun Hsu, *Data-Continuous SQL Process Model*, Lecture Notes in Computer Science 5331, On the Move to Meaningful Internet Systems: OTM 2008, pp. 175–192 (2008) ("Chen OTM")

THE REJECTIONS

1. Claims 1, 9–11, 13–15, and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over de Castro Alves '352 and Chen IDEAS. (*See* Final Act. 2–10.)

2. Claim 2 stands rejected under 35 U.S.C. § 103(a) as unpatentable over de Castro Alves '352, Chen IDEAS, and Navas. (*See* Final Act. 10–11.)

3. Claims 3, 4, 6, 8, and 16–19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over de Castro Alves '352, Chen IDEAS, and Chen OTM. (*See* Final Act. 11–14.)

4. Claim 5 stands rejected under 35 U.S.C. § 103(a) as unpatentable over de Castro Alves '352, Chen IDEAS, and de Castro Alves '356. (*See* Final Act. 14–15.)

5. Claim 7 stands rejected under 35 U.S.C. § 103(a) as unpatentable over de Castro Alves '352, Chen IDEAS, Chen OTM, and Friedman. (*See* Final Act. 16–17.)

6. Claim 12 stands rejected under 35 U.S.C. § 103(a) as unpatentable over de Castro Alves '352, Chen IDEAS, and Friedman. (*See* Final Act. 17–18.)

ANALYSIS

The Examiner rejected claim 1 as obvious in view of de Castro Alves '352 and Chen IDEAS, finding the disputed limitation—"validate and resolve a subclass type of the table valued user defined function based on the metadata and the insert statement"—in Chen IDEAS:

> Chen et al disclose to "validate and resolve a subclass type of the table valued user defined function based on the metadata and the insert statement, wherein the subclass type is one of a plurality of subclass types defined for the table valued user defined function" in section 4.3 ("several data structures are provided by sub-classing the corresponding ones in query executor ... "; the "handle of RVF Execution (hFE) keeps track, at a minimum, the information about input/output relation arguments: schema, values (as C array), return mode, result set ... "; it is noted that "information about input/output relation arguments" is metadata; the "hFIC" is used to control the execution of the RVF and has a pointer to the hFE as to validate subclass type based on metadata

> in which the "return mode" has subclass type of TUPLE_MODE and SET_MODE (section 4.1, "Return mode" bullet)).

(Final Act. 4–5, emphasis omitted.)

Appellants argue that "Chen says nothing whatsoever about validating and resolving the 'TUPLE_ MODE' and 'SET_ MODE' (i.e., the asserted subclass type)." (App. Br. 11.) The Examiner answers "by referring to Chen section 4.1 ('Return mode' bullet), in which the return mode is being validated in order to return one row of data at a time or multiple rows at a time." (Ans. 20.) Appellants respond that "[f]irst, the 'Return mode' bullet section of Chen says nothing whatsoever about the return mode being validated" and "[s]econd, Chen says nothing whatsoever about the 'return mode' being validated based on the 'INSERT INTO' statement in the example query shown in section 5.1 of Chen." (Reply Br. 4.)

In its entirety, the "Return mode" bullet of Chen IDEAS reads as follows:

> **Return mode.** Conceptually an RVF return a relation, or tuple-set. There are currently two return modes: TUPLE_MODE for returning one tuple-per-call in multiple calls, once for each input tuple, and SET_MODE for returning the entire tuple-set in a single call. With the TUPLE_MODE, there exist multiple NORMAL_CALLs, each generates one output tuple; with the SET_MODE, a single NORMAL_ CALL generates the entire output relation. The resulting tuples are kept in a tuple-store before returning.

(Chen IDEAS at 48.) We conclude that the Examiner has not provided a sufficient explanation of how this passage, which essentially just describes the types of RVF return modes, teaches or suggests "validat[ing] and resolv[ing] a subclass type of the table valued user defined function based on the metadata and the insert statement" and, therefore, we do not sustain (a)

the rejection of claim 1, (b) the rejections of independent claims 14 and 15, which include analogous limitations, or (c) the rejections of dependent claims 2–13 and 16–20, all of which also contain such limitations. As this issue is dispositive, we do not reach Appellants' other arguments.

DECISION

The rejections of claims 1–20 are reversed.

REVERSED